

1. For example, 0 may indicate a state that a finger is fully opened, whereas 1 may indicate a state that a finger is bent as much as possible.

**[0174]** According to an embodiment, Button Information indicates a state that a physical button is pressed. For example, 0 may indicate a state that the button is not pressed, 0.5 may indicate a state that the button is half pressed, and 1 may indicate a state that the button is fully pressed. According to an embodiment, Data End may notify the end of data and may be used for checking integrity of the data.

**[0175]** According to the present disclosure, a movement of a user's hand may be accurately reflected to a virtual reality and the user's hand may interact with content via haptic. Therefore, a realistic impression of the virtual reality may be provided to the user. Furthermore, interactive content may be provided to the user instead of simple passive content.

**[0176]** The device described herein may comprise a processor, a memory for storing program data and executing it, a permanent storage unit such as a disk drive, a communications port for handling communications with external devices, and user interface devices, including a touch panel, keys, buttons, etc. When software modules or algorithms are involved, these software modules may be stored as program instructions or computer readable codes executable on a processor on a computer-readable medium. Examples of the computer readable recording medium include magnetic storage media (e.g., ROM, floppy disks, hard disks, etc.), and optical recording media (e.g., CD-ROMs, or DVDs). The computer readable recording medium can also be distributed over network coupled computer systems so that the computer readable code is stored and executed in a distributed fashion. This media can be read by the computer, stored in the memory, and executed by the processor.

**[0177]** It should be understood that embodiments described herein should be considered in a descriptive sense only and not for purposes of limitation. Descriptions of features or aspects within each embodiment should typically be considered as available for other similar features or aspects in other embodiments.

**[0178]** While one or more embodiments have been described with reference to the figures, it will be understood by those of ordinary skill in the art that various changes in form and details may be made therein without departing from the spirit and scope as defined by the following claims.

**[0179]** Throughout the present specification, the term "unit," "module," or the like means a unit for processing at least one function or operation, and this unit may be implemented by hardware, software, or a combination thereof.

**[0180]** The term "unit" or "module" may also be stored in an addressable storage medium or may also be configured to operate one or more processors.

**[0181]** The term "unit" or "module" may include, by way of example, components, such as software components, object-oriented software components, class components and task components, processes, functions, attributes, procedures, subroutines, segments of program code, drivers, firmware, microcode, circuitry, data, databases, data structures, tables, arrays, and variables, although not limited thereto.

What is claimed is:

1. An electronic device comprising:

a source configured to generate a magnetic field;

a motion detector configured to obtain a coordinate of a user's hand based on the generated magnetic field; and

a virtual reality providing device configured to reflect the coordinate of the user's hand received from the motion detector in a virtual reality environment based on a change of a location of the source due to a movement of the user.

2. The electronic device of claim 1, wherein the source is further configured to be attachable to and detachable from the virtual reality providing device.

3. The electronic device of claim 1, wherein the virtual reality providing device is further configured to correct the coordinate of the user's hand, received from the motion detector, based on the location of the source, in relation to a portion of the body of the user based on the change of the location of the source due to the movement of the user.

4. The electronic device of claim 1, wherein the virtual reality providing device comprises:

a communication interface configured to communicate with the motion detector;

a sensor configured to detect the movement of the user; and

a processor configured to obtain a coordinate of the user's hand by correcting the coordinate of the user's hand received from the motion detector based on a portion of the body of the user being used as a reference point.

5. The electronic device of claim 4, wherein the virtual reality providing device further comprises a display configured to display the virtual reality environment having reflected therein the coordinate of the user's hand to the user.

6. The electronic device of claim 1, wherein the virtual reality providing device is further configured to provide a virtual reality environment modified based on information regarding type of the motion detector received from the motion detector.

7. The electronic device of claim 1, wherein the virtual reality providing device is further configured to generate a vibration generating signal based on a coordinate of an object in the virtual reality environment and the coordinate of the hand of the user.

8. A motion detector comprising:

a controller configured to obtain motion data comprising at least one of information regarding a movement of a user's hand, information regarding type of the motion detector, information regarding a type of an accessory coupled to the motion detector, information regarding an operation status of the motion detector, and information regarding pressing of button of the motion detector; and

a communication interface configured to transmit the obtained motion data to a virtual reality providing device that generates a virtual reality environment reflecting the movement of the user.

9. The motion detector of claim 8, further comprising a housing configured to be separable into a first portion comprising the controller and the communication interface and a second portion different from the first portion.

10. The motion detector of claim 9, wherein the housing comprises a curved portion, and

a portion of the curved portion of the housing is mounted on a particular portion of the user's hand.

11. The motion detector of claim 9, wherein the housing comprises at least one sensor configured to sense a movement of a finger of the user on at least one side of the housing.